Amendments In the Claims

Please amend Claims 1, 4, 7, 8, 13, 16, 19, 24, 27, 29, 30, 33 and 35 as follows:

1. **(Currently Amended)** A method for transporting information over a network comprising:

decomposing an input datastream into a plurality of sub-streams, wherein

said decomposing comprises placing a selected portion of the input datastream into a selected one of a plurality of channels, and

a sub-stream of said sub-streams comprises the selected portion of the input datastream; and

communicating said sub-streams between a first network element and a second network element of said network by transporting each one of said sub-streams over a corresponding one of a plurality of channels, wherein

a **transmission rate** ~~**bandwidth**~~ of said input datastream is greater than a **maximum transmission rate** ~~**bandwidth capacity**~~ of any one of said channels.

2. (Original) The method of claim 1, wherein

each of said channels is an optical channel.

3. (Original) The method of claim 2, wherein

each of said optical channels corresponds to a wavelength.

4. **(Currently Amended)** The method of claim 1, wherein

said each one of said sub-streams has a **transmission rate** ~~**bandwidth**~~ that is equal to or less than a **maximum transmission rate** ~~**bandwidth capacity**~~ of a corresponding one of said channels.

5. (Previously Presented) The method of claim 1, further comprising:

assembling said sub-streams into a reconstructed output datastream.

6. (Previously Presented) The method of claim 5, wherein said assembling comprises:

placing a portion of each of said substreams in a queue, wherein said reconstructed output datastream is output by said queue.

7. **(Currently Amended)** The method of claim 5, further comprising:

performing protocol processing on said input datastream; and

performing protocol processing on said reconstructed output datastream**, wherein said protocol processing is performed using a protocol processor comprising a protocol stack**.

8. **(Currently Amended)** The method of claim 1, further comprising:

performing compression on a one of said sub-streams, wherein said one of said sub-streams has a **transmission rate** ~~**bandwidth**~~ greater than a **maximum transmission rate** ~~**bandwidth capacity**~~ of the corresponding selected one of said channels.

9. (Original) The method of claim 1, wherein said network is an existing network.

10. (Previously Presented) The method of claim 1, wherein said network comprises an underlying network infrastructure, and the method is performed without alteration of said underlying network infrastructure.

11. (Original) The method of claim 10, wherein said network comprises a fiber-optic system.

12. (Currently Amended) The method of claim 1, wherein said decomposition comprises:

placing the portion of said input datastream in one of a plurality of queues, wherein the queue corresponds to the selected one of said channels.

13. **(Currently Amended)** A method for receiving information transported over a network comprising:

receiving a plurality of sub-streams, wherein

said sub-streams are created by decomposing an input datastream into said sub-streams, wherein

said decomposing comprises placing a selected portion of the input datastream into a selected one of a plurality of channels, and

a sub-stream of said substreams comprises the selected portion of the input datastream,

each of said sub-streams is transported over said network on the selected one of the plurality of channels, and

a **transmission rate** ~~**bandwidth**~~ of said input datastream is greater than a **maximum transmission rate** ~~**bandwidth capacity**~~ of any one of said channels; and

assembling said sub-streams into a reconstructed output datastream.

14. (Original) The method of claim 13, wherein

each of said channels is an optical channel.

15. (Original) The method of claim 14, wherein

each of said optical channels corresponds to a wavelength.

16. **(Currently Amended)** The method of claim 13, wherein

said each one of said sub-streams has a **transmission rate** ~~**bandwidth**~~ that is equal to or less than a **maximum transmission rate** ~~**bandwidth capacity**~~ of said corresponding one of said channels.

17. (Original) The method of claim 13, wherein said assembling comprises:

placing a portion of each of said substreams in a queue, wherein said reconstructed datastream is output by said queue.

18. (Previously Presented) The method of claim 13, further comprising:
decomposing said input datastream into said sub-streams; and
transporting said each of said sub-streams over said network on said corresponding one of a plurality of channels.

19. **(Currently Amended)** The method of claim 13, further comprising:
performing protocol processing on said input datastream; and
performing protocol processing on said reconstructed output datastream**, wherein said protocol processing is performed using a protocol processor comprising a protocol stack**.

20. (Original) The method of claim 13, wherein said network is an existing network.

21. (Previously Presented) The method of claim 13, wherein
said network comprises an underlying network infrastructure, and
the method is performed without alteration of said underlying network infrastructure.

22. (Original) The method of claim 21, wherein said network comprises a fiber-optic system.

23. (Previously Presented) The method of claim 13, wherein said decomposition comprises:
placing the selected portion of said input datastream in one of a plurality of queues, wherein
each of said queues corresponds to a one of said plurality of channels.

24. **(Currently Amended)** An apparatus for transporting information over a network comprising:
a first sub-stream management device, comprising
an input configured to receive an input datastream, and
a plurality of outputs, wherein

each of said outputs is configured to output one of a plurality of sub-streams, wherein

the input datastream is decomposed to form the plurality of sub-streams, wherein

said decomposing comprises placing a selected portion of the input datastream into a selected one of the plurality of outputs, and

a sub-stream of said sub-streams comprises the selected portion of the input datastream,

each of said sub-streams is transported over said network on a corresponding one of a plurality of channels, and

a **transmission rate** ~~**bandwidth**~~ of said input datastream is greater than a **maxiumum transmission rate** ~~**bandwidth capacity**~~ of any one of said channels.

25. (Original) The apparatus of claim 24, wherein each of said channels is an optical channel.

26. (Previously Presented) The apparatus of claim 25, wherein each of said optical channels corresponds to a wavelength.

27. **(Currently Amended)** The apparatus of claim 24, wherein said each one of said sub-streams has a **transmission rate** ~~**bandwidth**~~ that is equal to or less than a **maximum transmission rate** ~~**bandwidth capacity**~~ of said corresponding one of said channels.

28. (Previously Presented) The apparatus of claim 24, further comprising a second sub-stream management device, comprising

an output configured to output a reconstructed output datastream, and

a plurality of inputs, wherein

each of said inputs is configured to receive one of said sub-streams; and

an underlying network infrastructure, communicatively coupled to said first and said second sub-stream management devices, and comprising said channels.

29. **(Currently Amended)** The apparatus of claim 28, further comprising

a first protocol processor, coupled to said input; ~~and~~

a second protocol processor, coupled to said output**; and**

wherein,

the first and second protocol processors each comprise a protocol stack.

30. **(Currently Amended)** An apparatus for transporting information over a network comprising:

a first sub-stream management device, comprising

an output configured to output a reconstructed output datastream, and

a plurality of inputs, wherein

each of said inputs is configured to receive one of a plurality of sub-streams,

said sub-streams are created by decomposing an input datastream into said sub-streams, wherein

said decomposing comprises placing a selected portion of the input datastream into a selected one of a plurality of channels, and

a sub-stream of said sub-streams comprises the selected portion of the input datastream,

each of said sub-streams is transported over said network on the selected one of the plurality of channels, and

a **transmission rate** ~~**bandwidth**~~ of said input datastream is greater than a **maximum transmission rate** ~~**bandwidth capacity**~~ of any one of said channels.

31. (Original) The apparatus of claim 30, wherein each of said channels is an optical channel.

32. (Previously Presented) The apparatus of claim 31, wherein each of said optical channels corresponds to a wavelength.

33. **(Currently Amended)** The apparatus of claim 30, wherein said each one of said sub-streams has a **transmission rate** ~~**bandwidth**~~ that is equal to or less than a **maximum transmission rate** ~~**bandwidth capacity**~~ of said corresponding one of said channels.

34. (Previously Presented) The apparatus of claim 30, further comprising a second sub-stream management device, comprising

an input configured to receive said input datastream, and

a plurality of outputs, wherein

each of said outputs is configured to output one of said sub-streams; and

an underlying network infrastructure, communicatively coupled to said first and said second sub-stream management devices, and comprising said channels.

35. **(Currently Amended)** The apparatus of claim 34, further comprising a first protocol processor, coupled to said input; ~~**and**~~

a second protocol processor, coupled to said output**; and**

wherein,

the first and second protocol processors each comprise a protocol stack.

36. (Previously Presented) The method of Claim 1 wherein selecting the selected one of a plurality of channels comprises:

using a simple round-robin technique to choose an available one of the plurality of channels.

37. (Previously Presented) The apparatus of Claim 24 wherein selecting the selected one of the plurality of outputs comprises:

using a simple round-robin technique to choose an available one of the plurality of outputs.